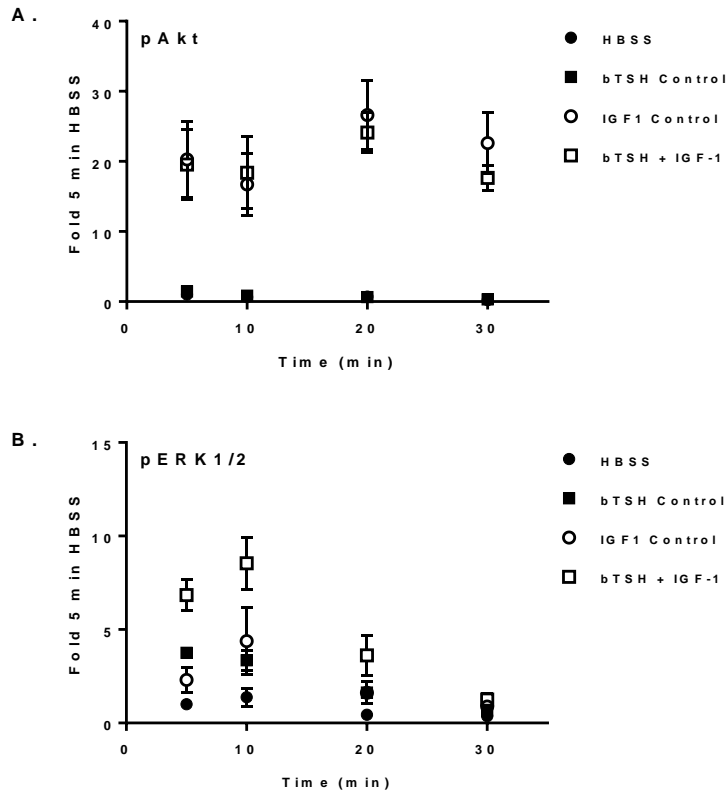
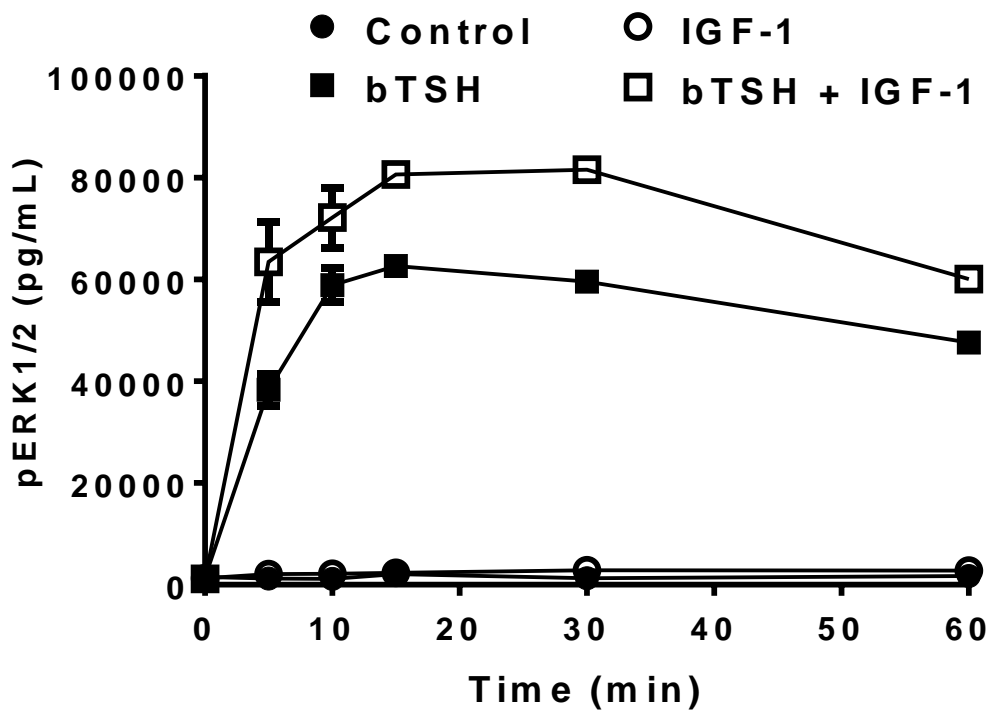


Supplemental Data



Supplemental Figure 1. Phospho-kinase stimulation in GOFs

GOFs were plated and serum-starved as above, then treated with HBSS (closed circles), 100 mU/mL bTSH (closed squares), 100 ng/mL IGF-1 (open circles), or bTSH plus IGF-1 (open squares) in serum-free media for 5, 10, 20, and 30 min. Cell lysates were prepared using the Bio-Plex Pro Cell Signaling Kit and protein measured with magnetic Bio-Plex Pro singleplex sets for **(A)** phospho-Akt (Ser473) and total Akt, or **(B)** phospho-ERK 1/2 (Thr202/Tyr204, Thr185/Tyr187), and total Erk 1/2 using Bio-Plex MAGPIX multiplex reader according to manufacturer's directions. Data are shown as mean \pm SEM, $n = 4$ from two different patient strains of phosphorylated/total signal normalized to the 5 min HBSS control.



Supplemental Figure 2. Phospho-kinase stimulation in HEK-TSHR cells

HEK-TSHR cells were stimulated at 37°C at given time points with HBSS (closed circles), 100 mU/mL bTSH (closed squares), 100 ng/mL IGF-1 (open circles), and bTSH plus IGF-1 (open squares). ERK1/2 phosphorylation was determined by ELISA.